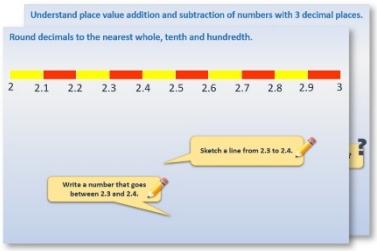
Week 8, Day 3
Multiplication and division

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. Start by reading through the **Learning Reminders**.
   They come from our *PowerPoint* slides.



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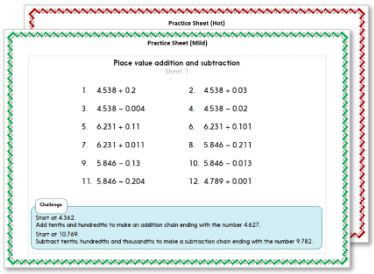
2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
   Check the answers.



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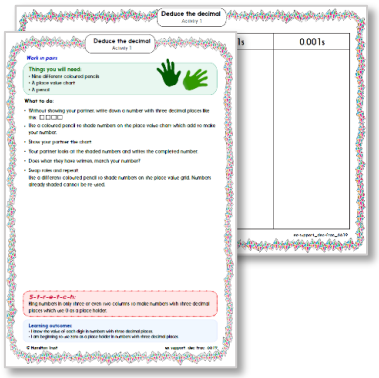
3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**



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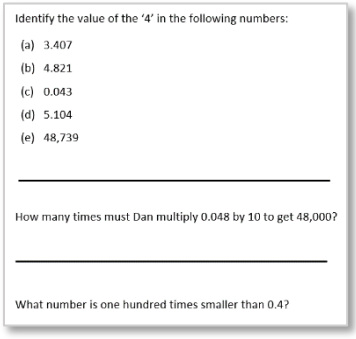
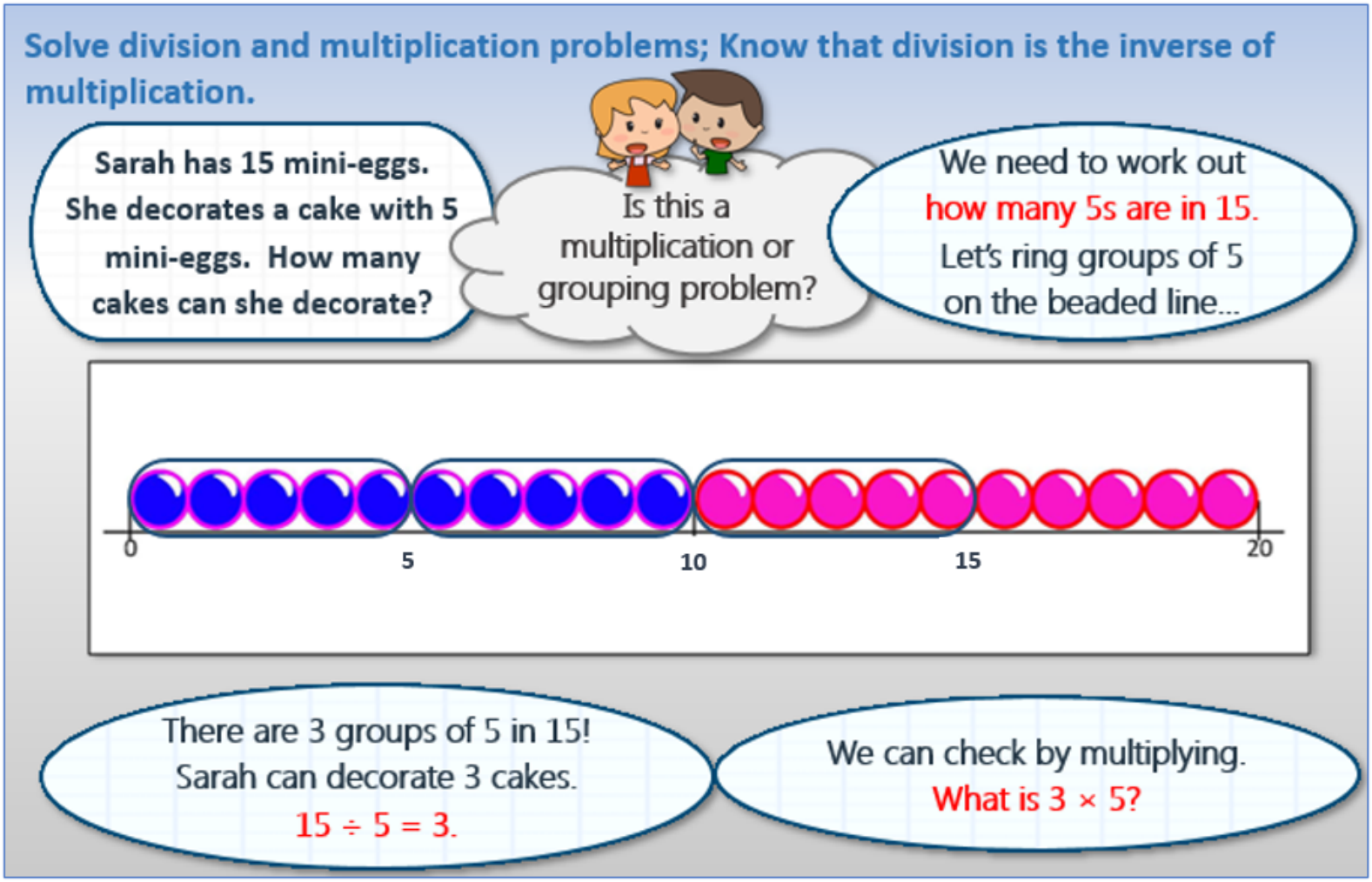
4. Have I mastered the topic? A few questions to **Check your understanding**.
   Fold the page to hide the answers!



Learning Reminders



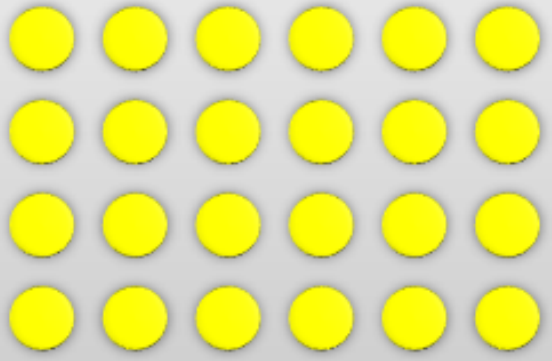
Learning Reminders

Solve division and multiplication problems; Know that division is the inverse of multiplication.

Jeff the farmer had 4 boxes of 6 eggs. How many eggs did he have altogether?

Is this a multiplication or grouping problem? Are there any clues in the question?

We need to work out how many eggs are in 4 boxes of 6 eggs. Let's draw an array.



4 rows of 6, that's 24 eggs!

$4 \times 6 = 24$

Practice Sheet Mild
Sorting word problems

Decide whether each word problem is a multiplication or grouping problem and then solve it.

1. There are 24 children in the playground. They need to get into teams of 6. How many teams will there be?
2. There are 21 biscuits that need to be packaged into piles of 3. How many packages will there be?
3. There are 3 boxes, each containing 8 new balls. How many balls are there altogether?
4. There are 9 flower pots in the garden, each planted with 3 bluebell bulbs. How many bluebell plants will grow altogether?
5. There are 6 cars in the car park, each with 4 wheels on them. How many wheels altogether?
6. There are 5 bowls of fruit on the table. Each bowl has 5 pieces of fruit in it. How many pieces of fruit are there altogether?

Challenge

Can you write a multiplication word problem then write a grouping problem that uses the same three numbers?

Practice Sheet Hot

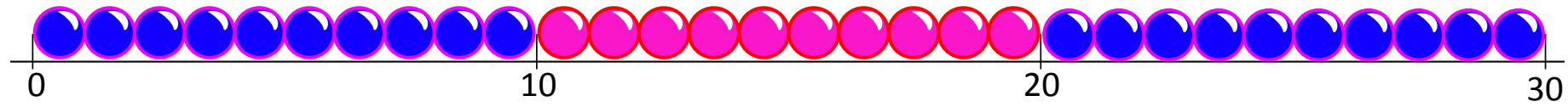
Sorting word problems

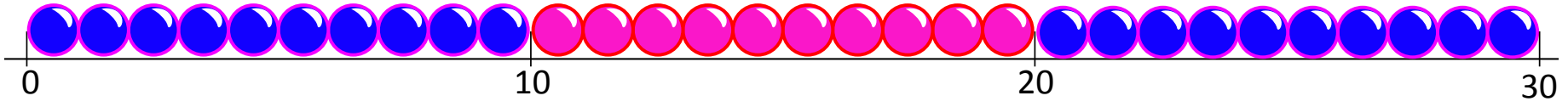
Decide whether each word problem is a multiplication or grouping problem and then solve it.

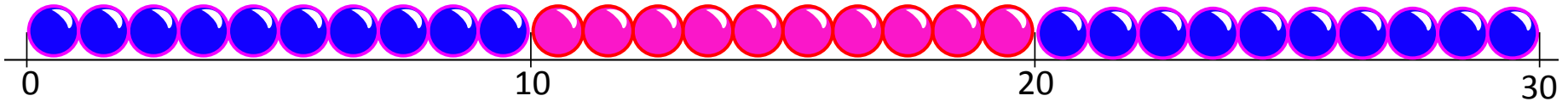
1. There are 24 new books that come in sets of 8. How many classes can have a set of books?
2. There are 40 sun lower seeds that need to be planted in pots. Only 2 seeds can go into one pot. How many pots will be needed?
3. There are 6 carriages on a train. Each carriage has 5 people in it. If the train is full, how many people are there altogether?
4. There are 5 trays in the staffroom, each holding 7 mugs of tea. If the trays are full, how many cups of tea are there altogether?
5. The tray of flapjack has come out of the oven. It is cut into 4 rows of 6. How many flapjacks are there?
6. There are 40 strawberries. How many bowls of 5 strawberries can we have?
7. How many toy cars can be made with 28 wheels?
8. Libby runs around the garden 3 times every minute. How many times does she run around the garden in 9 minutes?

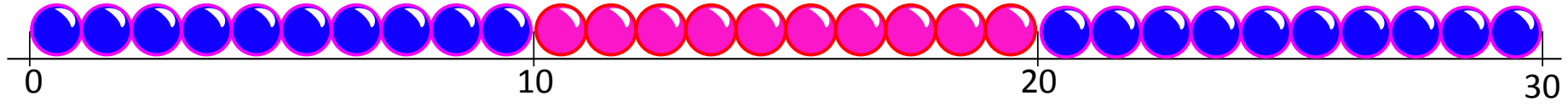
Challenge

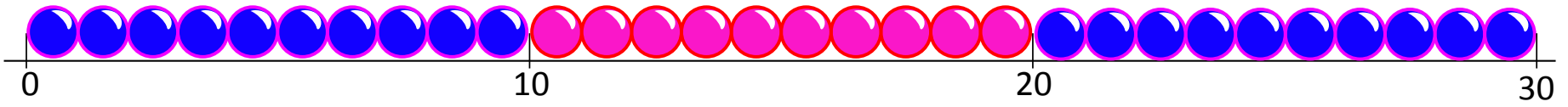
Can you write a multiplication word problem then write a grouping problem that uses the same three numbers?

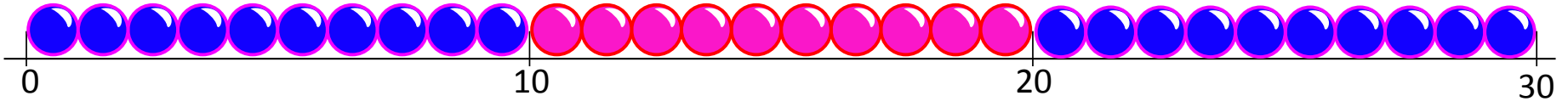












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Practice Sheet Answers

Sorting word problems (Mild)

1. Grouping problem. There will be 4 teams. 24 ÷ 6 = 4
2. Grouping problem. There will be packages. 21 ÷ 3 = 7
3. Multiplication problem. There are 24 balls altogether. 3 x 8 = 24
4. Multiplication problem. 27 bluebell plants will grow in the garden. 9 x 3 = 27
5. Multiplication problem. There will be 24 wheels altogether. 6 x 4 = 24
6. Multiplication problem. There are 25 pieces of fruit altogether. 5 x 5 = 25

Sorting word problems (Hot)

1. Grouping problem. 3 classes can have a set of books. 24 ÷ 8 = 3
2. Grouping problem. 20 pots will be needed. 40 ÷ 2 = 20
3. Multiplication problem. There are 30 people altogether. 6 x 5 = 30
4. Multiplication problem. There are 35 cups of tea altogether. 5 x 7 = 35
5. 24 flapjacks
6. 8 bowls
7. 7 cars
8. 27 times

Challenge

Accept any multiplication and division word problems written using the same numbers.

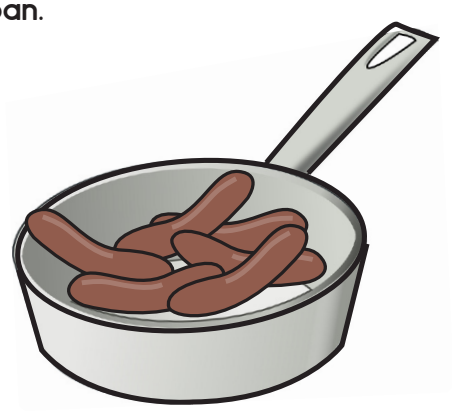
A Bit Stuck?
Sort and Solve

Things you will need:
- Scissors

What to do:

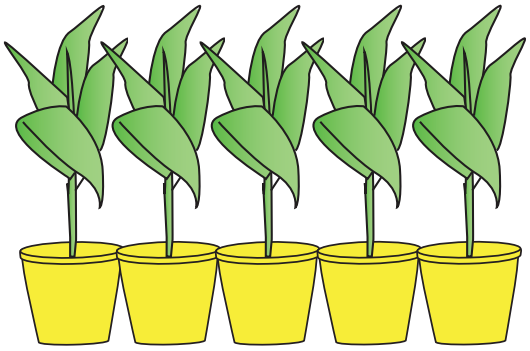
- Cut up the word problems.
- Read the problems one at a time. Try to imagine the 'story' each one is telling.
- What strategy will you need to solve it, multiplication or grouping?
- Sort the problems into two sets, according the strategy needed.
- Now answer each of the problems.
  It might help to draw an array, or draw groups on a number line...?

There are 6 sausages frying in a pan.



Billy has 2 pans like this.
How many sausages does he have altogether?

Ellis is planting.

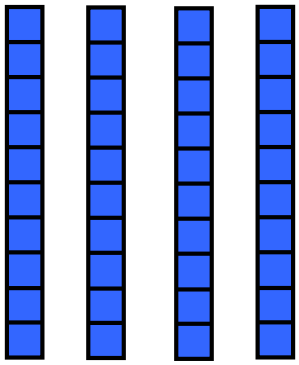


He has 20 plants and is putting them in rows of 5 plants.
How many rows can he plant?

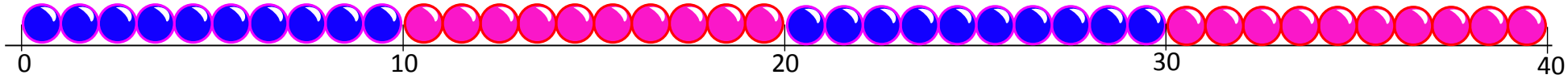
Ruby has 40p in 10p coins.

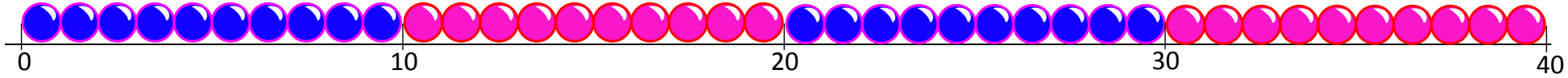
How many 10p coins does she have?

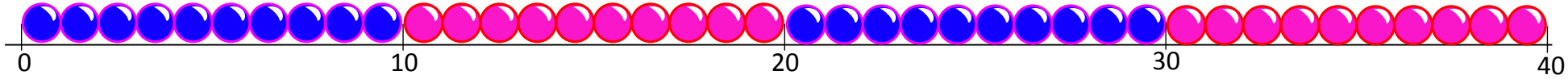
Melody builds 4 towers of 10 bricks.

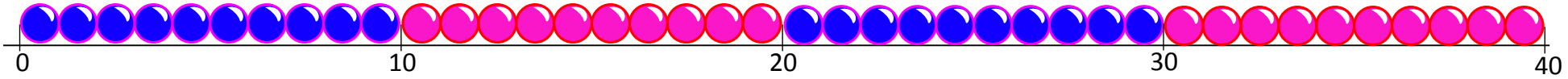


How many bricks did she use?









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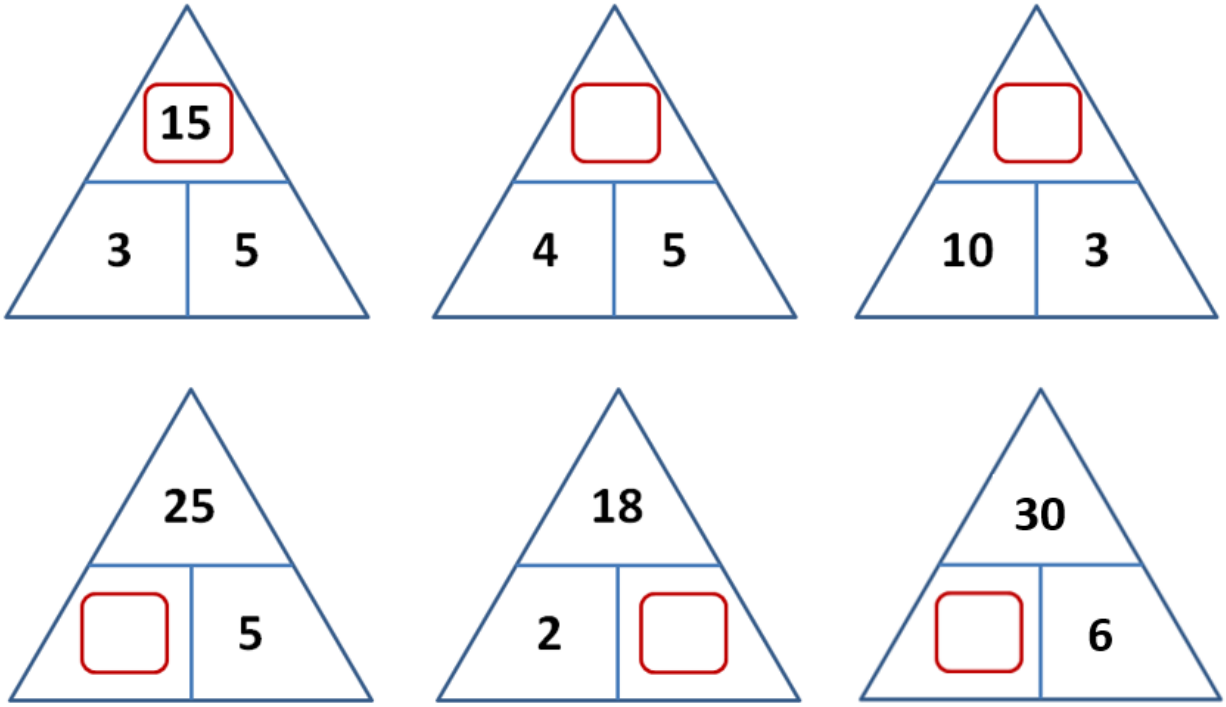
Check your understanding:

Questions

In the first triangle diagram, can you see a relationship between the number on top and the two below? Write four number sentences to show those relationships.

Find the missing number in the other five triangles.



Write at least one multiplication and one division number sentence for each diagram.

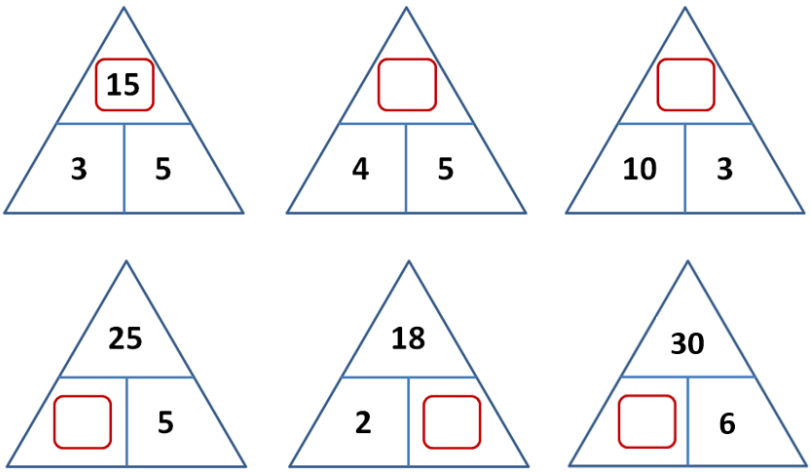
Answers on the next page

Check your understanding:

Answers

In the first triangle diagram, can you see a relationship between the number on top and the two below? Can you write four number sentences to describe those relationships?

Work out the missing number in the other five triangles.



Write at least one multiplication and one division number sentence for each diagram.

The number on the top is the product of the other two, so for the first triangle the four number sentences are:

$3 \times 5 = 24$ $5 \times 3 = 15$ $15 \div 3 = 5$ $15 \div 5 = 3$.

The missing numbers for the other triangles on the top row are 20 and 30 and on the bottom row 5, 9 and 5 respectively.

Children can be challenged to find all four number sentences for each triangle and discover the 'odd one out' – the one with 25 at the top has only 2 number sentences, since it is the product of 5 multiplied by itself.